

Commonwealth of Kentucky
Division for Air Quality
PERMIT STATEMENT OF BASIS

Title V (final) No. V-98-020
Ichikoh Manufacturing, Incorporated
Shelbyville, Kentucky
May 11, 2000
Sreenivas Kesaraju, Reviewer
Plant I.D. #104-3680-0034
Application Log # F595

SOURCE DESCRIPTION:

Ichikoh Manufacturing, Incorporated is a manufacturing plant located in Shelby County, Kentucky which produces rear and side view mirrors for the automobile industry. The mirrors are molded from ABS plastic and painted with wide range of colors.

This source consists mainly of injection molders and Paint Booth Systems. The Paint Booth system consist of Paint Rooms where the molded auto parts are painted. The Paint Booth system is a totally enclosed system consisting of individual spray stations (Paint Rooms) and Water Walls. The molded parts are first wiped with Isopropyl Alcohol (IPA) and then the Base Coat and Color Coat are applied. Some color coatings are followed by a Clear Coat. The final step of the paint system is the drying process. This process is conducted in an oven operating at a temperature of about 176° F. Each spray booth and the oven has an individual exhaust stack.

The emissions from this source are VOC and Particulate (PM10) emissions. The VOC emissions are major and are from painting process and injection molding machines. All the VOC emissions are uncontrolled. Other sources of VOC are wiping the parts with IPA and cleaning the mixing drums and spray guns with Clean Up Solvent. The potential of HAPS from this facility is 62.51 TPY. There are no applicable MACT standards for this kind of operations at this time. However, Surface Coating of Plastic parts and Products MACT might be applicable in future. The particulate matter emissions are from the paint overspray and are subject to 401 KAR 59:010. The particulate emissions are controlled by water walls in paint booth systems P1, P3, P4 and P5 and Dry Filters in P2.

COMMENTS:

Emission Points 01, 02, 03, 04, 05:

These emission points are the Paint booth systems P1, P2, P3, P4 and P5. The emissions from the painting operations are VOC's and Particulate Matter.

VOC emissions:

The paint mix used in painting operations consists of raw paint, thinner and catalyst. The VOC contents for the raw paint, thinner and catalyst are taken from MSDS sheets of each individual paint type, thinner type, and catalyst type and are used to calculate VOC emissions. The VOC emissions

from painting operation are calculated as if 100% would be emitted from the spray stations or paint rooms where applied. However, approximately 25% of the VOC in the applied coating would be carried over to the curing oven where it would be released. There are no applicable regulations for VOC emissions. The regulation 401 KAR 59:225, New miscellaneous metal parts and products surface coating operations, is not applicable since the coatings are on plastic parts rather than on metal surfaces.

The particulate matter (PM10) emissions are generated from the overspray during the painting operation. The particulate matter is controlled by water curtains in P1, P3, P4 and P5 and by dry filter in P2. The regulation 401 KAR 59:010, New Process Operations applies to the particulate matter emissions. The source is required to operate the water curtains all the time in P1, P3, P4 and P5 and a dry filter in P2 to meet 401 KAR 59:010, New Process Operations. The potential particulate emissions are calculated using the paint mix having the highest solids content at all the paint booth systems (P1, P2, P3, P4 and P5). The affected facilities will comply with the particulate emission limits (401 KAR 59:010) by operating Water Curtains and Dry Filter all the times when painting.

The manufacturer's guidelines require changing the filters every four hours to keep the control efficiency of the filters at 98.5%. Internal Standards and manufacturer's guidelines are used to keep the water curtains operating properly and to keep the control efficiency at 99.0%. The Permit requires the operation of the Water Curtains as per the guidelines in "Paint Booth Preventive Maintenance Document," and the Dry Filters in accordance with the guidelines in "Filter Change in P-2 Document."

EMISSION AND OPERATING CAPS DESCRIPTION:

Emission Caps:

This permit is being issued as a synthetic minor permit. The source wide cap on VOC's is 239 TPY. The permit requires the source to keep daily records on paint usage and monthly records on the clean up solvent and Isopropyl Alcohol usages. The Permit also requires monthly reporting of source wide VOC emissions.

Operating Restrictions: None

OPERATIONAL FLEXIBILITY: None

CREDIBLE EVIDENCE:

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

Comments:

Public notice was placed in **SENTINEL-NEWS** in Shelbyville, Kentucky on November 18, 1998. During the 30-day comment period, no comments were received from the public. During the 45-day comment period, no comments were received from the U.S.EPA. Also, since there are no states that are within 50 miles of the site, there are no affected states and comments were not solicited from any adjoining states.